ATTACHMENT 8

WASTE STORAGE, PROCESSING, AND TRACKING

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1.0 Introduction

This Attachment outlines specific requirements for the management of wastes prior to incineration at the Clean Harbors Aragonite facility. It discusses available management options and specifies requirements for storing, managing, processing, and tracking wastes in containers and in bulk.

This Attachment addresses the management of wastes accepted at the facility. However, there are two situations where wastes are managed at the facility that have not been accepted. These are transfer operations and rejected wastes. Management of these wastes is discussed in Sections 1.1 and 1.2 below. The management of site-generated waste is discussed in Section 3.4.

1.1 Transfer Operations

After off-loading, Clean Harbors Aragonite may temporarily (ten days or less) hold wastes manifested to another facility similarly to that allowed in R315-6-7. This will be referred to as transfer operations. These containers will not be subject to the requirements for barcodes/green acceptance labels or marks, but they will be clearly marked/labeled as transfer wastes. They may only be held in E1, E5, or in Bays 1-6. If transfer wastes are held in one or more bays, accepted and transfer wastes will not be placed in the same row and wastes will be segregated according to compatibility. The date that they are placed into the holding area will be clearly documented in the operating record.

1.2 Rejected Wastes

Occasionally, a generator will ship waste to Aragonite for treatment that for a variety of reasons will not be accepted. These are referred to as "rejected wastes." The procedures below will be used to ensure that these wastes will be managed properly while on-site and shipped off-site expeditiously.

There are two scenarios that may occur where rejected waste may need to remain on-site for a short period of time. The first is for scheduled containers that initially appear to match the manifest. However, based on fingerprint analyses, LDR form inspection, etc., Aragonite may discover that it cannot or does not want to manage some of the waste that is received. The second scenario is when containers arrive which are not identified on the manifest. These will be considered to be rejected waste while the discrepancy is investigated. These containers may be held at the facility for a short time before resolving the issue and accepting them or shipping them off-site.

Under both of these scenarios, the container would receive a barcode during the receiving process. The barcode would appear similar to other Aragonite barcodes but in the waste tracking system the process status code would be set to “RTAF” or “RTG”. This would prevent them from being put on a job and processed at the facility.

The location of all rejected waste will be tracked in the computerized waste tracking system similar to all other wastes while on-site. The waste tracking system will clearly show that the

material is rejected waste and when this determination was made. All containers of rejected waste will be barcoded to facilitate tracking and will also be clearly labeled as rejected near the barcode on the container.

Rejected containers, except gas cylinders, may be temporarily placed in the "K" or "M" rows of building E-1 or in any of the bays to await shipment off-site. Arrangements will be made to ship the material to another TSD or to return it to the generator. Rejected wastes will not remain on-site for longer than 30 days, unless an extension has been granted by the Executive Secretary. If Aragonite decides to accept a container of waste that was initially rejected (e.g., an extra drum that arrived on a load) that determination will be made within 30 days of receipt of the container.

Rejected compressed gas cylinders may be temporarily placed in the cylinder storage area to await shipment off-site.

2.0 Waste Receipt and Acceptance

2.1 Pre-transport Requirements

All generators must prepare all shipments in accordance with 40 CFR §262.20-23, (Subpart B-the Manifest), 40 CFR §262.30-33 (Subpart C-Pre-transport Requirements), State of Utah regulations, and the Clean Harbors Aragonite guidelines for waste acceptance and receiving. All containers must meet HM-181, Department of Transportation Performance Oriented Packaging (DOT acceptable containers).

2.2 Vehicle Check-in and Routing

All trucks arriving at the Clean Harbors Aragonite, facility must stop and their drivers check in with the security guard. Drivers present the manifest(s) to the guard who contacts the appropriate Clean Harbors Aragonite personnel who performs a visual inspection of the manifest and vehicle. The driver is directed to the scale and the incoming weight is recorded on the weigh ticket. The truck is then directed to the proper unloading/sampling area or drop area. Trucks with frozen waste may also be placed in the thaw shed to thaw.

2.3 Acceptance and Sampling

Waste is received from Clean Harbors Aragonite approved transporters in vans, flat-bed trailers, bulk solid trucks (end-dumps, dump trucks, and roll-offs), and bulk liquid tankers.

2.3.1 Vans and Flat Beds

Vans proceed to one of the container building unloading docks and unloading begins. Clean Harbors Aragonite personnel remove the containers from the vehicle to the scale station and record the weight on each container. The appropriate containers will be moved to the sampling area. Containers are only opened for visual inspection and sampling in the receiving and holding floor areas of buildings E-1 and E-5, bays 3, 4, and 5, and in bays 1 and 6 when in receiving mode. Compressed gas cylinders will be placed on racks for transport and storage in the cylinder storage area. If the van cannot be unloaded immediately, it may be directed to one of

the drop areas (along the fence east of the container storage buildings or between the container storage buildings -- another location south of main street may be used on a temporary basis only after receiving oral approval from DSHW) until an unloading dock is available.

Flat-bed trailers and vans are used for transporting large items such as transformers, and frequently carry smaller DOT acceptable containers intermixed with the load. These containers are off-loaded and checked through the same system as described above.

The receivers verify container count and also verify the integrity of the containers. Manifest discrepancies (count) are reported to the appropriate waste acceptance personnel. Sampling is done per the Waste Analysis Plan. Sampling and analysis results are used to determine the appropriate management process(es) for the material. Aragonite barcodes are placed on the containers during this receiving process. Once it has been determined that the waste will be accepted, a green acceptance label or mark will be placed on the Aragonite barcode. After the waste has been accepted, the containers may be moved from the receiving and holding areas to the storage or processing areas. Compressed gas cylinders may be moved to the compressed gas storage area prior to acceptance. They will not remain in the receiving building for more than 24 hours. All discrepancies will be resolved with the generator prior to accepting the containers. Written documentation of these discussions and resolutions will be clearly noted in the document packet for each manifest. Each document packet will also contain records indicating that each waste has been accepted or rejected, initialed and dated by the appropriate waste acceptance personnel.

2.3.2 Bulk Solids, Sludges, Liquids

Bulk solids containers (end-dumps, dump trucks, and roll-offs) must be covered. Tarps or lids are acceptable container covers if the tarps or lids are visually free of cracks, holes, gaps, or other open spaces. Tarps or lids may be removed for sampling or removing waste but must be closed upon completion of the activity or leaving the vicinity of the container. Any bulk solids container that will not be off-loaded within 24 hours of receipt must be visually inspected for visible cracks, holes in tarps, gaps, or other open space into the interior of the container. Efforts must be made to repair any defect found within 24 hours after detection. The repair must be complete within five days after detection or the waste must be removed from the container. The container cannot be used to manage waste until the repair is complete.

The opening device or dome on tankers may be opened for sampling, visual inspection of the contents, or washout, but must be closed upon completion of the activity or leaving the vicinity of the container. Any tanker that cannot be off-loaded within 24 hours of receipt must be visually inspected for proper closure of all hatches and valves.

Trucks containing bulk wastes proceed to one of the unloading areas (bermed area east of the bulk solids building for bulk solids and sludges, the bulk liquids unloading building for bulk liquids, the drive through direct burn station or the truck unloading direct burn station for tankers to be fed directly to the kiln), or the sampling platform between the control room and the utility building where sampling is done per the Waste Analysis Plan. During inclement weather

sampling may be done in the bulk liquids unloading building (E-14) or the thaw shed. If the truck cannot be unloaded immediately, it may be directed to the drop area (along the fence east of the bulk solids building for bulk solids and sludges, or northwest of the bulk liquids unloading building for bulk liquids -- another location south of main street may be used on a temporary basis only after receiving oral approval from DSHW) until an unloading area is available. No unloading can commence until the necessary laboratory analyses are complete and the necessary waste tracking requirements are met.

Sampling and analysis results are used to determine the appropriate management process(es) for the material. Once it has been determined that the waste will be accepted, the waste is accepted by off-loading it to a receiving/storage tank, by placing the tanker in the drive through direct burn station (if not already located there) and transferring the material to tank T-411 or T-412 in the waste tracking system, placing the tanker in the truck unloading direct burn station (if not already located there) and transferring the material to tank T-413 or T-414 in the waste tracking system, or by placing (if not already located there), the tanker or bulk container on the bulk solids/sludge pad or E-1, E-5, or E-4 receiving docks and by placing a green label or mark on the barcode indicating that the waste has been accepted. Prior to and during the unloading of bulk liquids, personnel visually check to ensure all valves are in the appropriate position, transfer lines are secured and the drip pans or absorbent pads are under the connections. A check is made to ensure that compatibility and other waste acceptance analyses are complete prior to commencing the transfer. Clean Harbors Aragonite personnel remain on-the-job while waste is removed from the transport vehicle and until all transfer lines have been disconnected.

In order to reduce demurrage costs, Clean Harbors Aragonite may transfer direct burn bulk waste from a customer tanker to a site tanker. The tanker-to-tanker transfer is performed in the truck unloading building, E-14, much like a tanker to tank transfer. The receiving tanker is DOT certified for integrity and roadworthiness annually and is subject to all permit requirements for direct burn feeding.

The appropriate Clean Harbors Aragonite personnel visually inspect bulk solid waste material during the off-loading to a bulk solids tank. Should the employee see any abnormal or non-conforming material, off-loading stops until the situation is rectified.

Each document packet will contain records indicating that each waste has been accepted or rejected, initialed and dated by the appropriate waste acceptance personnel.

2.4 Check-out Procedure

Once the transport vehicle is empty, it is directed to the scales for weigh-out. The transporter receives a copy of the weigh ticket and the signed manifest. Clean Harbors Aragonite personnel will note if the actual weight deviates by more than 10% of the manifested weight, constituting a manifest discrepancy (bulk loads only). If this occurs, the appropriate waste acceptance personnel will be informed and will commence discussions with the generator. Written documentation of these discussions and resolutions will be clearly noted in the document packet for each manifest.

3.0 Waste Storage

3.1 Containers

This section details the processes that will be used to store waste in containers at the facility.

The east storage building contains a receiving area (building E-5 floor area), two bays for receiving or incompatible waste depending on the operating mode (bays 1 and 6), an additional bay for incompatible waste (bay 2), and two special waste storage areas (building E-6 and E-7) which are for liquids that are classified as "ignitable" or have a flash point of less than 140 °F. The west storage building has a receiving area (building E-1 floor area), three bays for receiving/incompatible waste (bays 3, 4, and 5), and two general storage areas (buildings E-2 and E-3). Three workstations are located in building E-2 which are used for processing containers of waste and building E-3 has two safes for storage of DEA materials. The container processing area (building E-4) contains the decant room and the repack area. Building E-4 and the breezeway (covered, bermed area between building E-4 and the kiln front wall) are used for staging containers for feed to the kiln, repack area, decant area, bulk solids tanks, small sludge tank, and/or shredder. The direct burn pad is used to hold a direct burn vessel while its contents are being fed to the kiln. The drive through direct burn station and the truck unloading direct burn station are used to hold tankers while their contents are being fed to the kiln. The truck unloading direct burn station may also used to store smaller containers on pallets. The bulk solids/sludge pad may be used to store tankers, bulk containers such as rolloffs and smaller containers on pallets. The drive through direct burn station is also used to hold containers of waste while their contents are being decanted to a tanker. The drum pumping storage area is used to stage containers for processing through the drum pumping station, with the drum pumping station being the area where containers are held while their contents are fed to the kiln. The E-1, E-5, and E-4 receiving docks may be used to store bulk containers, containers on pallets and containers in refrigerated trailers. These areas are shown on drawings D-800-M-402 and D-800-M-403 in Attachment 10. Containers of waste may also be stored in the lab cooler. Compressed gas cylinders are stored in the cylinder storage area west of Center Street and north of 2nd South Street as indicated on Drawings D-034-M-002 and D-034-M-401 and at the cylinder feed station indicated on D-034-M-002.

The current operating mode (receiving or storage) of bays 1 and 6 will be maintained in the operating record and prominently displayed in buildings E-1 and E-5 at all times.

Material waste profiles, sample results, and ultimate destinations provide the basis for determining where each container is stored and what is done to prepare the material for incineration or transfer.

The waste types commonly stored in the general storage area consist of liquids, dirt and debris from spills, capacitors awaiting shredding, transformers awaiting draining and flushing, solids

awaiting incineration or transfer to off-site facilities, and empty containers that will be either incinerated, reused, crushed and disposed off-site, or recycled.

Dioxin contaminated wastes will be stored similarly to all RCRA wastes. Handling instructions will be based on the characteristics, special instructions provided on waste profile sheets, and lab results for compatibility.

Clean Harbors Aragonite may accept infectious wastes provided the generator packages them in appropriate containers meeting DOT packaging requirements. These containers are packaged so as to prevent leakage or rupture during transport to the site. If possible, scheduling of any infectious waste will coincide with immediate feed to the kiln. The containers will be fed via the elevator and ram feeder. In the event these wastes cannot be incinerated within seven days of receipt at the facility, they will be stored in a permitted storage area which will be maintained at or below 40 °F and fed as soon as possible so that storage will be minimized.

Containers stored at the facility will be DOT acceptable containers with the following exceptions:

- containers of waste generated on-site need not be DOT acceptable but must be in good condition and must be covered or must have a drum liner which is kept closed. They must also be made of appropriate materials of construction and be sturdy enough to be safely transported inside the buildings and throughout the facility.

- in the event that a generator does not use DOT acceptable containers to ship its wastes, the containers can only be stored if they are in good condition, covered or sealed, and sturdy enough to be safely transported inside the buildings and throughout the facility.

Roll-off bins, used for bulk solids, will not be stored in the building but will be placed into other permitted storage, emptied into a bulk solids tank or transferred to an EPA approved hazardous waste landfill. "Super Sack" type bags or boxes or other similar DOT bulk containers may be used to store contaminated soil or other dry debris in the container management areas.

All containers, regardless of size, must be visually inspected within 24 hours of receipt and every 12 months thereafter. Visual inspection includes checking the container and its cover and closure devices for cracks, holes, gaps, or other open spaces into the interior of the container. Any defects must be corrected within 24 hours of detection.

Any container that is larger than 119 gallons and is not a DOT acceptable container must be tested in accordance with EPA Method 21 and 40 CFR §265.1084(d) for organic emissions if it contains hazardous waste in light material service. If the monitoring shows the emissions to be greater than 500 ppm, the container must be repacked or processed within five days. Containers that have been demonstrated, within the preceding 12 months, to be vapor-tight, as specified by 40 CFR §264.1086(h), are exempt from these requirements.

Containers are inspected for leaks prior to pallet pickup. Should any container, except cylinders, leak, the contents are transferred to a new container or the container is placed into an overpack; 85 gallon overpacks are used for 55 gallon containers. Should transfer of the waste to another container be necessary because of poor condition of the container, it is normally conducted in the decant room or repack room in building E-4 or one of the workstations in building E-2. However, if moving it may cause it to leak or otherwise deteriorate, it may be transferred at its current location. If a leaking container is to be overpacked, any leakage is corrected by overpacking the container before it is moved. Compressed gas cylinders that are determined to be leaking will be transferred to the glove box at the cylinder feed station and the cylinder contents vented to the incinerator. If the incinerator is down when a cylinder is leaking, the cylinder will be transferred to a remote area of the facility and allowed to leak until empty.

If the spilled material flows into a sump, Clean Harbors Aragonite employees will follow the spill containment procedures and immobilize the spilled material using absorbents and neutralizing chemicals (if recommended). Sumps are kept clean and free of chemical spillage in order to minimize the danger of an incompatible reaction occurring in the sump.

If the spilled material splashes against containers of an incompatible waste material, the containers will be moved into a safe area and cleaned of all chemical residue. The floor/pad area will be decontaminated in accordance with emergency spill containment procedures.

All containers are marked and labeled with the appropriate RCRA/TSCA hazardous waste labels prior to storage in the container storage area.

Containers are transported from the dock to the assigned row and space. Forklifts are used to move the palletized containers within the container management areas.

Compressed gas cylinders are transferred into racks in the receiving buildings upon receipt and transferred to the cylinder storage area for storage. Only compatible cylinders are stored in a given rack and racks holding incompatible cylinders are stored in separated areas of the cylinder storage area. Determination of compatibility and storage separation distances are in accordance with the International Fire Code.

3.2 Bulk Solids, Sludges, and Liquids

Bulk wastes accepted at the facility are either liquids, solids, or sludges. This section outlines the management of bulk wastes at the facility.

The blend liquid tanks and the aqueous liquids tanks are to be operated in accordance with the process flow diagrams D-034-PF-300 and D-034-PF-301. Bulk liquids are off-loaded at the bulk liquids unloading building, E-14. After assuring that the material is compatible with the material already in the tank, it is pumped to a liquids tank (T-301 through T-312 or T-321 through T-324). Blended liquids may be pumped from tanks T-301 through T-306, T-309, T-310, and T-321 through T-324 for feed to the incinerator burners. Material from different tanks may be

commingled to obtain a more uniform blend and to obtain the desired feed chemistries and characteristics. The source of blend feed to the burners may come from up to two sources (i.e., two tanks) at one time. The aqueous waste feed comes from tanks T-307, T-308, T-311, or T-312. There are occasions when material must be removed from the tanks, and it is not moved to another tank in the tank farm or fed to the incinerator (e.g., tank cleanouts for inspections or maintenance, removal of material which may be plugging the tanks, etc.). In these instances, the material may be placed into containers or into a tanker. The containers will be barcoded and placed into permitted storage. The tanker will be placed in the drive through direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, E-1, E-5 or E-4 receiving docks, or will be off-loaded within 24 hours by pumping the material into a liquids tank or to the sludge tank system. Any residues in the tanker may be flushed into drums or the bulk solids tanks system.

There may be times where, due to safety or compliance concerns, or for other reasons, bulk liquids will not or cannot be stored in a tank. In these situations, the tanker truck may be placed in either the drive through direct burn station or the truck unloading direct burn station and the material fed directly to the direct burn lance, A-101.

At times customers may request that their waste be handled in dedicated tankage or there may be a need for direct burn liquid surge capacity. Tank T-309 can be isolated and used for such service. Pump P-608 in the east bay of the truck unloading building and dedicated piping is used to transfer from the truck tanker received at the plant to tank T-309. All other entrances to the tank are equipped with pipe spools that are removed while tank T-309 is in dedicated service. Liquid stored in tank T-309 is transferred to tank trucks when leaving this tank and fed to the kiln from either the drive through direct burn station or the truck unloading direct burn station. Fuel oil trucks are unloaded adjacent to the fuel oil storage tank using a truck pump. The facility notifies the Division when T-309 will be used for dedicated storage, giving information on the waste to be handled, its compatibility with the tank and piping, and the procedure that will be used to clean the tank and piping after use.

Liquid material which is too viscous or otherwise unsuitable for management in the liquid tank farm is put in the sludge system. Normally it is off-loaded to the small sludge tank (T-406) from a tanker parked in the bermed area directly east of the tank. However, sludge can also be off-loaded directly to the large sludge tank (T-401). Sludge which is received in drums can also be poured from the drums into the small sludge tank. Sludge may be transferred between either of the two sludge tanks. A recirculation line to near the front wall provides a source of sludge feed to the incinerator. Part of the recirculating sludge is drawn off through a mass flow meter to the kiln front wall sludge lance (A-103). Similar to bulk liquids, there may be times where, due to safety or compliance concerns, or for other reasons, sludges will not or cannot be stored in a tank. In these situations, the tanker truck may be placed in either the drive through direct burn station or the truck unloading direct burn station and the material fed directly to the sludge lance, A-103.

Bulk solids material is off-loaded into permitted container storage on the bulk solids/sludge pad, E-1, E-5, or E-4 receiving docks, or emptied into either the small bulk solids tanks or the large bulk solids tank. Material from small containers or the entire container with its contents may also be placed in the tanks. These may be dumped through one of the large roll up doors on the east side of the building. Material may be processed from any of these tanks through the shredder to make a more manageable, uniform, and homogenous feed. Drums from the breezeway may also be fed directly to the shredder. The discharge of the shredder is into tank T-404B-West. Material from the tanks is moved to the other tanks, to the shredder, or to the apron feeder feed hopper by means of a clamshell.

3.3 Empty Containers

Empty containers are managed by incineration, recycling, off-site disposal and reuse.

Empty containers requiring incineration are staged in the container processing room for possible shredding and subsequent incineration.

Acceptable containers that are in good condition and empty as defined in R315-2-7 are set aside. They are staged and may be sent off-site to a recycler.

Empty containers may be managed by shipping them off-site for disposal at an approved facility.

Receiving may select empty containers for reuse by Clean Harbors Aragonite for purposes such as repacking. The receiver inspects these containers and ensures that they are empty. Empty containers are placed in the container processing, general storage, and receiving areas.

Empty compressed gas cylinders are returned to the customer or de-valved and shipped off-site to a landfill or recycler.

3.4 Site-generated Wastes

Clean Harbors Aragonite is a generator of incineration waste residue (slag, spray dryer and baghouse catch) which will be reburned or manifested off-site to an EPA approved disposal facility. The residue holding areas exist to handle the incinerator residue prior to reburning or off-site shipment. These areas are located east and west of the liquid tank farm, and south of the incineration system. Clean Harbors Aragonite is also a generator of other site-generated waste (e.g. spill cleanups, PPE, etc.). These wastes will be processed on-site or shipped off-site similar to other wastes at the facility. All waste which has been accepted by Clean Harbors Aragonite or generated on-site which must be shipped off-site, is manifested off-site with Clean Harbors Aragonite as the generator. An addendum will accompany each shipment identifying waste codes, waste quantities, and land disposal restrictions.

Roll-offs or other DOT acceptable containers will be used to accumulate incinerator slag and baghouse/spray dryer residue. These containers are suitable for transportation to an approved disposal facility. The slag and residue containers are designed to be reusable. For these and other site-generated wastes, the requirements of R315-5 shall apply.

3.5 Off-site Shipments

Clean Harbors Aragonite is a storage facility for waste that cannot be incinerated. Materials shipped to other facilities include wastes which have been accepted for storage only, rejected wastes, and wastes handled as part of the transfer operations. The latter two scenarios are discussed in Sections 1.1 and 1.2 of this Attachment. Material that has been accepted for storage only and is not amenable for incineration is shipped to other off-site facilities. Clean Harbors Aragonite only accepts for storage, materials for shipment to off-site facilities that are acceptable by those other facilities. Determination of the appropriate available technologies for the waste is utilized to determine the final disposition of the waste. The waste profile and laboratory results are reviewed by the appropriate Clean Harbors Aragonite personnel to determine the proper destination. Clean Harbors Aragonite places storage-only material into appropriate storage areas. Clean Harbors Aragonite is deemed the generator for all off-site shipments of waste that have been accepted. An addendum accompanies each shipment identifying quantities of material from individual generators.

3.6 Containment Systems

Containers are stored in buildings with the floors sloped to separate and independent sumps of sufficient size to contain 25 percent of the total volume stored. The containment base is sloped to promote internal drainage and ultimate collection in sumps.

The concrete containment base (floor) is elevated approximately 4 feet from grade. The base is a solid, reinforced concrete slab free of cracks and gaps. The floor and curbing is constructed of a continuous, monolithic poured concrete floor. A minimum of 6 inch curbs are in the building. The concrete is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. The foundation thickness is considered good engineering design practice for foundations.

The entire container management building is roofed and has four complete sides. The roof of the building is sloped to promote external drainage of any rainfall. In addition, the edges of the roof are extended outward to prevent any rainfall water leakage into the building.

The corridor for transportation in each building is separated by a slope from the storage areas.

The containment system for the breezeway is similar to that for the container management buildings except that it does not have walls. It does have a roof so that precipitation into the area is minimized.

The cylinder storage area and the cylinder feed station do not provide secondary containment as it is not required. The cylinder storage area and cylinder feed station are protected by Jersey barricades or other physical means to protect the cylinders from vehicular damage. Four different areas are identified within the cylinder storage area in order to accommodate incompatible compressed gasses. The cylinders are stored on racks to prevent contact with the ground and to provide support from tipping over.

There are four tank containment areas for the liquid tank farm. The tanks are grouped so that four tanks are located within each tank containment area. Each containment area is maintained to provide a minimum containment volume equivalent to the volume of one of the tanks. The concrete of the floor and curbing is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. Any cracks or joints are sealed. The floors are sloped toward a sump in each containment area.

The large sludge tank is located within a concrete secondary containment system. It is a bermed area with a sump and pump for the collection and removal of accumulated material. The small sludge tank is located within a vault (sludge pit). The concrete in these containment systems is epoxy coated with Tnemic or equivalent and is thus sufficiently impervious to contain leaks and spills. Any cracks or joints are sealed. The floors are sloped toward a sump in each containment area.

The bulk solids tanks are placed on a concrete containment system and are constructed so that the bottoms of the tanks can be visually inspected for leaks. This is done from the concrete lined tunnel underneath the tanks. Normally, liquids are not placed in the bulk solids tanks. However, some liquids inevitably enter the tanks. Should a leak occur from one of the bulk solids tanks it would drain toward the tunnel and be contained within the tunnel or, for a very large leak, within the sludge pit.

The incinerator and air pollution control equipment is also contained within secondary containment systems. The floors are concrete and are sloped to provide drainage of precipitation and any other leaks and spills toward sumps where it is collected. Berms are also provided to segregate containment areas and to further contain wastes or other materials. Liquids collected in the sumps in the neutralization area are returned to the neutralization tanks for reuse in the process. Liquids collected in the other sumps are pumped to the tank farm and then fed to the incinerator or are otherwise managed as a hazardous waste. Liquid which spills out of the deslagger may be placed directly back into the deslagger provided no treatment occurs prior to its reintroduction into the deslagger.

The bulk solids/sludge pad is located on concrete pads that are sloped to sumps to provide drainage and containment of precipitation and any other leaks and spills. The drum pumping storage area is located on a concrete pad with secondary containment provided by portable containment units. Any material collected from these secondary containment units/areas will be pumped out/removed and managed as a hazardous waste. When containers of waste are in the bulk solids/sludge pad or drum pumping storage area, the area will be protected by Jersey barricades or other physical means to protect the containers from vehicular damage.

Secondary containment for the drum pumping station is provided by a built-in containment system that is part of the glove box.

Secondary containment for the E-1, E-5 and E-4 receiving docks is provided by concrete sloped to a sump to provide drainage and containment of precipitation and any leaks or spills. Any material collected in these secondary containment areas will be removed and managed as a hazardous waste.

Secondary containment for waste stored in the laboratory cooler is provided by portable containment units. Any material collected in these containment units will be removed and managed as a hazardous waste.

There is a small containment berm around the direct burn pad. Any spills in this area will be directed to the sump near the "A" damper (SP-624). The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible direct burn spill material out of the tank farm tanks.

The drive through direct burn station is a recessed drive-through area just south of the slag pad. It serves as secondary containment for a direct burn tanker and an additional tanker. Precipitation, spills or other liquids accumulated on the station will drain to sump SP-623. The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.

The truck unloading direct burn station is located in the east and center bays of the truck unloading building which serve as secondary containment for the direct burn tanker and other containers that may be stored there. A slot has been cut in the wall between the east bay and the middle bay to allow additional containment in the event there is discharged fire water in addition to a spill from the tanker or other containers. Spills or other liquids accumulated in the station will drain to sump SP-309. The piping from the sump will allow the contents of the sump to be pumped to another container such as a tanker or direct burn vessel as well as to the tank farm. This will keep incompatible or undesirable spill material out of the tank farm tanks.
The sumps at the facility are identified on drawing D-0340-M-002-SP in Attachment 10. All sumps will be inspected and emptied as described in the inspection plan (Attachment 3).

4.0 Waste Processing

Containers, except compressed gas cylinders, that are ready to be fed to the incinerator are staged on the conveyor in a sequence directed by the Production Planning Manager or designee. These containers will typically be 55-gallon drums but may be smaller or could be as large as a 110-gallon salvage drum. The container is moved via the conveyor to the feed elevator. The elevator raises the container to the kiln slide-gate located in the feed chute. The ram feed mechanism then pushes the container into the kiln via the feed chute.

Alternatively, the contents of a container may be emptied into the kiln using the container dumping system. With the dumping system activated, the elevator lifts a container into position

where the container is grabbed by the jaws of the dumping apparatus, the kiln slide gate opens, and the container is emptied into the kiln. A video camera directly above the dumping apparatus allows the operation to be viewed from both the control board and barrel feed station. After the contents of a container are dumped, the barrel feed operator has three choices: 1) the empty container is brought back down the elevator and returned for reuse to building E-4. This is the course of action under normal circumstances; 2) if the barrel feed operator observes that not all of the material has been emptied from the container, the slide gate can be reopened and the contents of the container dumped a second time. This process can be repeated as many times as necessary until the container is emptied; 3) if the barrel feed operator observes a fire or other situation that warrants it, the slide gate can be opened and the entire container and contents can be released into the kiln. Additionally, a water spray nozzle located directly above the container dumping system is available in the case of a fire. This nozzle is activated by the barrel feed operator.

Should waste transfer or treatment be necessary prior to feeding the container, except for compressed gas cylinders, to the incinerator (e.g., to improve the burn characteristics of the charge), it will be conducted in the decant room (decanting only), the repack room in building E-4, one of the workstations in building E-2, or in the drive through direct burn station (decanting only). Liquids removed from the containers will be transferred to a permitted storage tank, a truck tanker in the drive through direct burn station, a direct burn vessel, or be repacked and/or solidified. Containers of solids or sludge may also be transferred to the bulk solids tanks or small sludge tank. Any container, except a compressed gas cylinder, that cannot be emptied (per RCRA definition) may be shredded, if necessary, and incinerated. All open containers must be closed upon completion of the waste processing activity, or when leaving the immediate vicinity of the container.

The waste processing operations that are conducted at the facility are decanting, repack operations, shredding, and direct burn, as described below.

4.1 Decanting

Clean Harbors Aragonite will accept containers with free liquids; however, liquids may be decanted prior to being incinerated. The liquid is decanted from the containers to one of the tanks in the tank farm, to a direct burn vessel, or to a truck tanker. Production Engineers or designees determine where decanting will occur and to which destination the decanted material will be transferred. Decanting takes place only in the decant room of the container processing building (building E-4) or in the drive through direct burn containment area. Waste decanted to a direct burn vessel or truck tanker may be fed to the kiln through the direct burn line or transferred to the tank farm using the equipment in the truck unloading building.

Clean Harbors Aragonite, whenever possible, decants liquids (both ignitables and non-ignitables) prior to release for incineration. If the decanting operation is not able to process all containers as received, the receivers store containers holding liquid in a manner that allows easy access.

All material delivered to the Clean Harbors Aragonite facility that requires decanting is transferred to the container processing building (building E-4) or to the drive through direct burn tanker station. Whenever possible, direct burn material is taken directly to a decant station for transfer to a direct burn vessel, a bulk liquids storage tank, or a direct burn tanker.

Decanting operations require use of PPE and when performed inside buildings, point source ventilation hoods for vapors to avoid adverse health impacts to the operators. The operators must wear PPE as designated by the profile sheet.

Receivers utilize non-sparking tools during decant operations. Grounding/purging is used on tanks, lines, and containers.

4.2 Repack Operations

Repack operations may occur in two locations. These are the three workstations (WS1 through WS3) in building E-2 and the repack area in building E-4. Workstations WS1 and WS2 in building E-2 are open areas, primarily used in repacking and other container processing operations where the waste is not exposed to the atmosphere. Workstation WS3 is located within an enclosure in building E-2 , similar to the repack area in building E-4, and is typically used for repacking and other container processing operations where open containers are involved.

4.2.1 Description of Processing Activities

The processing activities which may occur are: 1) lab pack inspection, 2) lab pack repacking, 3) lab pack solidification, 4) liquid bulk-up, 5) compatibility testing and LEL screen, 6) container repacking, and 7) debris processing. These are described below.

1) Lab pack Inspection

Lab pack inspection involves removing the contents of a lab pack to verify the inventory sheet and then replacing the contents back into the lab pack.

2) Lab pack Repacking

Some or all of the content of a lab pack are removed and then selected contents are placed back into containers with the contents of other lab packs. The purpose of repacking is to increase/decrease the charge size to the incinerator. The inner containers of the lab packs are not opened but are redistributed to other lab packs. Excess absorbent and containers may be reused in making new lab packs.

3) Lab pack Solidification

This operation involves opening inner containers of lab packs and adding absorbent to the liquid. The purpose is to prepare a charge to the incinerator which will have more uniform burning characteristics and produce less of a shock to the system when fed (e.g. minimizing CO excursions, thermal shock to the refractory, etc.). Absorbents used include, soil, vermiculite, cellulose, sawdust, floor dry, etc. The compatibility of the absorbent with the liquid in the containers will be evaluated and any incompatibilities

noted on the lab pack instruction sheet. Also, if generators send too large an inner container, solidification may be used (or the material may be transferred to smaller containers). If the solidification operation involves an ignitable liquid, the operation may only occur in the E-4 repack area. The addition of solidification agent(s) to containers must not involve the active mixing of waste and agent.

4) Liquid Bulk-up

Some liquid is transferred to a larger container for the purpose of bulking up for eventual decanting. Solvents and other material are candidates for this process. If the liquid bulk-up operation involves an ignitable liquid, the operation may only occur in the E-4 repack area.

5) Compatibility Testing and LEL Testing

Any commingling of waste streams requires compatibility testing using the Clean Harbors Aragonite methods in the Waste Analysis Plan. Also, LEL testing on inner containers of lab packs may be necessary as required by the Waste Analysis Plan. These tests may be conducted in the repack area of building E-4. Testing in building E-2 is limited to inner containers of lab packs. If information exists that indicates it is likely that the material is ignitable (i.e. flash less than 140 °F), Clean Harbors Aragonite will assume the material is ignitable and may only conduct these tests on that material in the E-4 repack area.

6) Container Repacking

Some or all of the waste is removed from its original container and is placed into other containers. Water and/or absorbent may be added to improve the burning characteristics of the material (similar to the operation of lab pack solidification described above). Also, some repacking (splitting) is necessary to comply with the feed rate limits in the permit (e.g., metals). The purpose of repacking is to produce a container that meets the permit requirements and minimizes any upset conditions. If the container repacking operation involves an ignitable liquid, the operation may only occur in the E-4 repack area. The addition of solidification agent(s) to containers must not involve the active mixing of waste and agent.

In the case of repacking waste from a flow bin, the flow bin, containing a catalyst waste, is positioned on top of a custom platform. The container into which the waste will be transferred is placed under the flow bin and raised to the level necessary to form a seal between the flow bin and the container. An air-actuated slide gate controls the flow of material from the flow bin to the container. As the container is filled, the air displaced from the container is vented through a sock to filter any particulate matter. Flow bin repacking is limited to the E-4 repack area.

7) Debris Processing

Two types of debris may be treated in these areas. The first is waste debris that is treated to meet the requirements of 40 CFR §268.45 prior to landfilling. This only includes

debris that is generated at the site (not waste that has been received from off-site). The second type is equipment that may require being cleaned for the purpose of commencing maintenance activities (e.g., shredder teeth). The types of debris treatment that may be used are: abrasive blasting (E-4 only) and water washing and spraying. Sufficient containment devices must be in place to collect any residue from these operations. When this operation is ongoing, no other process may occur in that workstation or E-4 repack area.

4.2.2 General Operating Procedures

The storage requirements for rows A through G in building E-2 are unaffected by the operations in the workstations. All containers in any of the E-2 workstations or in the E-4 repack area will be staged into the proper location while in a workstation or repack area. Each workstation will be clearly marked off using lines painted on the floor. The number of containers being filled at each workstation or E-4 repack area will be limited by the space within that workstation or E-4 repack area. Sufficient space will be left within the workstations or E-4 repack area to allow unobstructed movement of personnel and necessary equipment.

All containers will be closed when repacking is not in operation. Not in operation is defined as no activity for thirty minutes at a workstation or E-4 repack area.

No material from an incompatible DOT hazard class may be located in any of the workstations in E-2 at any time. No material from an incompatible DOT hazard class may be located in the E-4 repack area at any time.

At the end of each shift each day, no more than the permitted capacity (four 55-gallon containers or 220 gallons per workstation or E-4 repack area) may remain in each workstation or in the E-4 repack area. All other containers must be removed and placed into permitted storage.

The proper Personnel Protective Equipment (PPE) shall be worn while conducting these operations. The required PPE will be specified on the profile sheet or site PPE matrix for non-profiled material (e.g. shredder teeth).

Workbenches, tables, and containers shall be grounded as necessary.

Repack operations will be conducted in a manner such that airborne dust is not visible in the building.

4.3 Shredding

Containers can be fed to the shredder either by using the elevator or by bulking (placing the entire container and its contents into a bulk solids tank) and then using the clamshell to feed the containers to the shredder. The container and contents are shredded into the bulk solids tank. Containerized waste can also be bulked by emptying the contents into the bulk solids tanks. The material may then be fed to the shredder by the clamshell. Similarly, bulk solids may be shredded by lifting the material with the clamshell and placing it in the shredder feed hopper.

Prevention of explosion danger in the shredder is accomplished by prohibiting potentially ignitable materials from being shredded.

The interlocks will allow operating the shredder in one of two modes:

1) Non-dusting and non-ignitable: The shredder will run continuously with the top flop gates remaining open to allow continuous feeding from the clamshell. Air flows through the open 20 inch damper to the combustion air system.

2) Dusting and non-ignitable: The shredder stops before the flop gate or barrel dump gate opens and restarts after the gate closes. Air flows through the open 20 inch damper to the combustion air system.

The procedure for determining the shredder operating mode is as follows:

1) Non-dusting and non-ignitable: The material has an LEL of less than 10% and is wet or otherwise incapable of dusting.

2) Dusting and non-ignitable: The material has an LEL of less than 10% and is dry or otherwise capable of dusting.

Determination of operating mode will be shown on the daily production plan originated by the Production Planning Manager or designee.

Clean Harbors Aragonite shall comply with the following conditions during both modes of operation described above:

1. The shredder area shall be equipped with a sprinkler system in accordance with Industrial Risk Insurer's pipe guidelines.

2. The shredding system shall be inspected in accordance with Attachment 3.

3. The shredder may be operated when the incinerator is not operating by venting it through the backup carbon adsorption system.

4. If containers of waste are bulked by placing the containers and their contents into a bulk solids tank, they will be restricted to processing through the shredder one profile at a time (with the exception of capacitors).

4.4 Bulk Waste Mixing and Blending

In order to achieve a more uniform feed to the incinerator, it may be desirable to blend bulk liquids and mix bulk solids.

The bulk liquid and sludge tanks are agitated by either a propeller-type mixer or by recirculation. The bulk solids may be mixed in the bulk solids tanks using a backhoe. The doors to the bulk solids tanks may not remain open for any mixing operations for more than 90 minutes during each 24 hour period.

4.4.1 Isocyanate Waste Bulking

Containerized liquid isocyanate wastes may be consolidated into bulk solids tanks T-403, T-404A and T-404B-East. When bulking isocyanate wastes, the contents of containers will be slowly poured onto the dirt or other waste in a bulk solids tank and mixed with a backhoe. The isocyanates are expected to react in various ways to form foams, polyurethanes, or other hardened or rubberized resins which may then be fed to the incinerator as part of the bulk solids feed. All other applicable permit requirements, e.g., waste acceptance, waste tracking, compatibility testing, time limits for doors to be open when mixing in the bulk tanks, etc., must be satisfied for isocyanate waste bulking operations.

4.5 Direct Burn

Some liquid wastes are not compatible with the tanks in the tank farm and/or the materials stored in them. Additionally, some sludges are not appropriate for management in the sludge tanks. These wastes are ideally fed directly to the incinerator from direct burn vessels, direct burn tankers, or directly from the container. Direct burn vessels are used only for in-plant decant/direct burn operations. Direct burn tankers are used for bulk shipments from the generator and for in-plant decant/direct burn operations. Direct burn from a container is used for materials that may be incompatible with tank or direct burn vessel construction materials or other wastes. In addition, direct feeding from a container reduces the need for repacking.

4.5.1 Direct Burn Vessels

Liquid wastes or sludges are decanted to a moveable direct burn vessel from the decant room in building E-4. Prior to decanting into a direct burn vessel, the vessel is purged with nitrogen, if necessary, to ensure that there is an inert atmosphere within the vessel. During the decanting operations, the direct burn vessel is located just west of the decant room, within the secondary containment system of building E-4. Should it be necessary to store the filled direct burn vessel prior to feeding it to the incinerator, it will be stored in an appropriate permitted area of the container management building or other permitted container storage area.

After the direct burn vessels are filled, they are moved by forklift to the direct burn pad near the south side of the kiln front wall. A compressed air hose is connected to the agitator motor on the direct burn vessel to agitate the waste and keep solids in suspension. Nitrogen is connected to the top of the direct burn vessel and the discharge is connected through a flow metering system to the direct burn lance (A-101) on the kiln front wall. Alternatively, it could be piped through the sludge flow metering system and sludge lance (A-103).

The nitrogen pressure is manually adjusted to that pressure necessary to force the waste liquid through the pipeline. The pressure required will depend on the viscosity of the waste but can never exceed the 120 psig setting of the pressure relief valve on the direct burn vessel.

A fail closed valve is installed on the outlet line from the direct burn vessel. The instrument air line that operates the valve is made of plastic so it will melt if there is a fire. The melted line will relieve the air pressure on the valve actuator causing the valve to fail in the closed position, thereby stopping waste flow.

4.5.2 Direct Burn Tankers

After a direct burn tanker is moved to the drive through direct burn station or the truck unloading direct burn station and accepted, nitrogen is connected to the tanker to force the waste through the discharge hose to a strainer and a pump. The waste is then pumped through the flow metering system to the direct burn lance (A-101) in the kiln front wall. Alternatively, it could be piped through the sludge flow metering system and sludge lance (A-103).

Containerized liquid wastes or sludges may also be decanted to tankers. During decant operations, a direct burn tanker is located in the drive through direct burn station. Containers are moved to the direct burn station (platform over the drive through area) and transferred into the tanker using a vacuum pump. Waste transferred to the tanker is fed to the kiln through the direct burn feed line.

4.5.3 Direct Burn Liquid Feed System From a Tanker or Direct Burn Vessel

Flow to the direct burn lance from either a direct burn vessel or a direct burn tanker is controlled and measured by a control valve and flow meter similar to the sludge system. Since the same flow metering and feed system is used for both the direct burn vessel and the direct burn tanker, only one of these may be in use at any given time.

The direct burn lance is similar to the sludge lance in that it is a pipe within a pipe. Liquid waste is in the inner pipe and compressed air is in the outer pipe. The pressure from the direct burn vessel or from the pump on the direct burn tanker pushes the liquid into the kiln and the compressed air in the outer pipe aids in pushing the liquid into the kiln, causes atomization, and aids in burning.

Following off-loading of the direct burn vessel or direct burn tanker to the incinerator, the feed lines are blown clear with nitrogen to ensure incompatible materials do not mix and react.

4.5.4 Direct Burn Sludge Feed System

The direct burn sludge feed system uses the same feed monitoring and control system as the sludge feed system from the tanks. However, when feeding from one of the direct burn stations, the lines are isolated from the sludge recirculation line so that material from the direct burn vessel or direct burn tanker will not enter the sludge tanks. Since the same flow metering and feed system is used for the direct burn vessel, the direct burn tanker, and the sludge feed from the tanks, only one of these may be in use at any given time.

Following off-loading of the direct burn vessel or direct burn tanker to the incinerator, the feed lines are flushed with an appropriate solvent to ensure incompatible materials do not mix and

react and to ensure that ignitable materials do not enter the sludge recirculation line and the sludge storage tanks.

4.5.5 Direct Burn Compressed Gas Cylinder Feed System

The contents of compressed gas cylinders are fed to the incinerator from an enclosure located on the west end of the slag pad. This enclosure is open on the south side and has openings at the top and bottom of the east and west sides to facilitate natural ventilation. One rack of cylinders (20 cylinders) will be brought to this cylinder feed station at a time. One cylinder at a time is removed from its rack and placed upon a tipping mechanism mounted on a scale (lecture bottles will be secured in a vice on a separate smaller scale). If the cylinder contains a liquid, the cylinder will be tilted. The contents of the cylinder flow from the cylinder through a valve that stops flow should an automatic waste feed cutoff occur, through a control valve, and then to an eductor at the afterburner burner station. The eductor is powered by nitrogen and pushes the gas or liquid into the south afterburner burner port. The valving and tubing are sized to contain cylinder pressure.

When the cylinder is empty, as determined by the system vacuum reaching the dead head vacuum for the eductor operating at the set nitrogen pressure, nitrogen will be used to flush the cylinder and equipment. To flush an empty cylinder, the cylinder will be pressurized with plant nitrogen by closing the automatic valves, hooking up nitrogen before the valves and letting nitrogen enter until line pressure is reached. The nitrogen is then disconnected and the automatic valves opened, letting the eductor draw the flush nitrogen out of the cylinder until dead head vacuum is reached. This process is repeated at least three times. Water is also available for flushing empty cylinders. After flushing, the cylinder will be returned to the customer or the valve will be removed and the cylinder landfilled or recycled. Documentation will be maintained to show that each cylinder was appropriately flushed. This documentation will include the cylinder number (i.e., document and item number) the date and time the flushing was completed and the pressures/vacuum attained during flushing. The operator performing the flush will sign the documentation indicating that proper procedures were followed. Cylinders that have leaked until they are empty, either in the glove box or at a remote location onsite, will also be flushed in similar fashion.

At the cylinder feed station, a glove box has been installed that will be used to manage leaking cylinders. The leaking cylinder or cylinders (if more than one, all cylinders must be compatible) are placed in the glove box and with the doors closed, an eductor will draw a vacuum of 1-2" w.c. on the glove box and exhaust it into the afterburner. Air or nitrogen (for flammable materials) will bleed into the box as needed to keep the vacuum setpoint. In the event of a waste feed cut-off while a leaking cylinder is in the glove box, nitrogen to the glove box eductor will continue to flow and the glove box will continue to be exhausted to the afterburner. The cylinder will remain in the glove box until it is empty and its contents are exhausted to the afterburner. The glove box will only be used in emergencies to manage leaking cylinders and will not be used routinely to empty cylinders.

4.5.6 Direct Burn From a Container

The glove box at the drum pumping station will hold up to four 55-gallon containers of compatible liquid. A pallet of containers, one pallet at a time, will be transferred from the drum pump storage area or another permitted storage area to the glove box at the drum pump station. The door on the glove box, gasketed to prevent leakage, will be closed with air cylinders, the bung on a container opened and a lance placed in the opening. Tubes supplying nitrogen will also be placed in the opening of the container, if the container contains flammable liquid. During processing, an eductor draws 90 scfm from the glove box to the afterburner and a vacuum breaker in the side of the glove box will bleed air into the box in order to maintain a vacuum of 1" water column. Waste is pumped through the lance to a diaphragm pump and valves to the sludge port in the front wall of the kiln. The wetted parts of the pump are conductive Teflon and the piping and valves are Teflon-lined to assure compatibility with the wastes being processed. The lance is made of Hastelloy. A dampener is integrated into the pump to achieve the required turndown and smooth out pulsation.

When waste is pumped from the container to the front wall of the kiln, a flow meter records the amount of liquid being fed. When the container is empty, air, or when processing flammable liquids, nitrogen, passing through the meter will record a high value and the record keeping programming will stop recording. The empty container will then be tilted and flushed with an appropriate liquid.

Before pumping waste that is not compatible with the last waste pumped, the system will be flushed with an appropriate flushing liquid. The production engineer responsible for the job will choose the flushing liquid based upon the waste. Water and fuel oil are available at the drum pump station. Nitrogen is also available for drying the piping if necessary.

There is an LEL monitor inside the glove box that will alarm locally and at the control board when an LEL above 20% is sensed. The glove box is equipped with a CO_2 fire protection system and explosion relief panels with a detonation flame arrestor located in the vent piping just before the eductor. The pressure relief device in the piping will vent back to the glove box.

The system will handle materials that the International Fire Code classifies as flammable liquids, corrosive, toxic and highly toxic materials, and oxidizers.

5.0 Waste Tracking

5.1 Introduction

Waste will be tracked while on-site so that its location is known at any time. Containers, with the exception of direct burn tankers that are accepted into the direct burn stations, will be tracked by a barcode label placed on each container and tracked in the plant wide database. The location of bulk wastes will be tracked in the plant wide database. All wastes managed on-site will be tracked in this system (hazardous as well as non-hazardous).

The current location of all waste will be maintained in the plant wide database. If there is a temporary problem with this computer system which does not allow the input of waste tracking data, wastes may still be moved and processed on-site provided the following occurs: The tracking of waste is accomplished through a manual tracking system designed to record the same information as the plant wide database, and the plant wide database is updated with the information accumulated on this manual tracking system as soon as the database is again functioning. The maximum time that this manual tracking system can be used as a substitute for the plant wide database is 24 hours for containers and 72 hours for bulk wastes and residues.

5.2 Container Tracking (Excluding Cylinders and Direct Burn Tankers)

The barcode is a label that is affixed to each container. It contains a number that is unique to that container from which information regarding the container can be found. Clean Harbors barcodes may already be on incoming containers if they have come from other Clean Harbors facilities. During the receiving process at the facility, a Clean Harbors Aragonite barcode label (designated with "AG") will be placed on all of the containers which have been manifested to the facility. Containers manifested to another facility that are stopping at the Aragonite facility for transfer operations will not receive an Aragonite barcode. Containers that have been accepted at the facility will have a green label or mark on the Aragonite barcode label. All containers in permitted storage except the receiving areas (floor areas of buildings E-1 and E-5 and bays 1 and 6 when in receiving mode, bays 3-5, bulk solids/sludge pad and E-1, E-5, E-4 receiving docks) and transfer wastes in bays 1-6 will have the Aragonite barcode label and a green acceptance label or mark on the barcode label except as provided in section 5.2.1.

The green acceptance label or mark is placed on the barcode of each container only after the contents have been sampled and it has been determined that the waste will be accepted. Once the green acceptance label or mark is placed the barcode label on the container, it is considered to have been accepted by Clean Harbors Aragonite. Each container is identified by a unique number which is on the barcode affixed to the container. Container inventory is tracked by row, space, and level in the building (see drawing D-800-M-402) and in the truck unloading direct burn station. Container inventory on the bulk solids/sludge pad and in E-1, E-5, and E-4 receiving docks is tracked by row and space. The container buildings and other container storage areas are marked with each row having an assigned letter. Each location within a row is given a space number. Every container in the container management areas will use the barcode system. The plant wide database will be updated each time a container is moved to another location.

The barcode number will be used to track the container in real time. The following is a description of the information fields required on the Clean Harbors Aragonite barcode label. Additional information (e.g., weight, acceptance date, profile number, generator, final destination, etc.) can be found by the item number in the waste tracking system.

Item Number: Unique number used to identify each individual item.

Common Name: Brief description of the material.

Waste Profile No: Waste profile number assigned by Aragonite or the waste processing code assigned upon acceptance by Aragonite.

Hazard Class: Hazard Class as described by DOT.

Repack containers will be given a new barcode. These will be identified by "REPACK" or "CONS" (for consolidate) prominently printed on the barcode. They will also contain the information listed above. The histories of these drums as well as cross references to previous item numbers can be found from the item number in the waste tracking system.

5.2.1 Barcode/Green Acceptance Label or Mark Exemption

The need can exist to unload a truck even though the receiving area is not cleared from a previous load. To accommodate this situation, Row A in E-2, E-3, E-6 and E-7 (see drawing D-800-M-402) is designated as a temporary (10 days or less) extension of the receiving area.

To identify the containers in temporary storage and subject to this exemption, each container in temporary storage (A rows) will be marked with the document and item number. Alternatively, groups of containers from the same document number may be shrink-wrapped and labeled with the document number for the group. All containers in a space (all three levels of a numbered area as indicated on drawing D-800-M-402) will have the same temporary storage date. A board near each A aisle will indicate the temporary storage date (the date first placed into temporary storage) for each space within that A row. If there is no date indicated for a particular space, the containers in that space will have an Aragonite barcode with a green acceptance label or mark on the barcode.

Containers in temporary storage will be kept closed and will be inspected at the same frequency as accepted containers. No container can remain in temporary storage longer than 10 days.

Containers holding wastes which have been repacked from containers already accepted at the facility will have a unique AG barcode (identified by "REPACK" or "CONS" (for consolidate) on the barcode) and will not be required to have the green acceptance label or mark on the barcode.

5.3 Decant Tracking

When a container is decanted, the original weight of the container will already be recorded in the database. When the container is moved to the decant staging area (building E-4) the location will be updated in the database. The container will be weighed again after the decanting operation. The weight of the decanted liquid and its new location (e.g., T-305) will be entered into the database. If all of the material from the container is not transferred, the material remaining will continue to be tracked with the container.

5.4 Repack Tracking

The original container to be repackaged will already be in the database. When a container is moved into a workstation or the E-4 repack area, the location in the database is updated. It will show the repack workstation to where the container is moved (e.g. WS1, etc.). Unique repack barcode labels (identified by "REPACK" or "CONS" (for consolidate) on the barcode) for the containers to which the material is repackaged are generated by the computer tracking system. The numbering system is generated by the computer tracking system and cross-references to the original container. When these new repack containers are created in the database, the system automatically assigns them the same location as the original container (e.g. WS1, etc.). The location of these containers is then updated when they are moved from the workstation to storage or other locations.

As repacking occurs, items from the original containers are transferred to the repack containers in the database so that there is an accurate accounting of the contents and weight in each repack container. The contents of the containers are also updated in the database to account for absorbents or other materials that are added to the containers.

5.5 Shredding Tracking

When the container to be shredded is moved to the shredding area, the location in the database is updated. Then, after shredding, the database is updated to show the material in the new location. Clean Harbors Aragonite personnel will manually log all transfers from the shredder to the bulk solids tank. This manual log is given to a support clerk by the end of the day. The material is then transferred to the appropriate bulk tank (i.e., T-404B-West) in the computerized waste tracking database.

5.6 Direct Burn Tracking

When a direct burn vessel is filled, the waste is transferred from the original container to the direct burn vessel in the waste tracking system (D890, D891, D892, D893) similar to a drum that is decanted to the tank farm. The location of the direct burn vessel is also recorded in the waste tracking system (using document numbers DB890, DB891, DB892, DB893). When the waste is to be fed to the incinerator, the direct burn vessel is moved to the direct burn pad and the location is updated in waste tracking.

If a direct burn vessel is moved to the truck unloading building for transfer to a tank, the location of the direct burn vessel is recorded. After the transfer, the location is moved to the new tank similar to a tank-to-tank transfer in the tank farm. When a direct burn tanker is used, the location of the waste is identified as T-411 or T-412 (for the drive through direct burn station) and T-413 or T-414 (for the truck unloading direct burn station) in the waste tracking system and the waste will be moved to the tank similar to incoming loads of bulk liquid which are off-loaded to the tank farm. The tracking of waste fed to the incinerator from a direct burn vessel or from a direct burn tanker is similar to wastes fed from the tank farm.

When a determination is made to decant to a direct burn tanker, containers to be decanted are transferred from their location in the storage buildings to a designated area within the secondary

containment at the drive through direct burn tanker station. The waste tracking system is updated to show that the containers have been moved to the drive through direct burn tanker station (i.e., "T-411D1, T-411D2, or T-411D3"). When a direct burn tanker is filled, the waste is transferred from the original container to the direct burn tanker (T-411 or T-412) in the waste tracking system similar to a container that is decanted to the tank farm.

5.7 Container Bulk-up Tracking

When containers of waste are bulked-up (i.e., placed into a bulk solids tank, or the contents emptied into a bulk solids tank or the small sludge tank) a tracking system similar to that for shredding is employed. Clean Harbors Aragonite personnel will manually log all of these transfers. This manual log is given to a support clerk by the end of the day. The material is then transferred to the appropriate bulk tank (i.e. T-403) in the computerized waste tracking database.

5.8 Bulk Solids, Liquids, and Sludges Tracking

When bulk materials are accepted and unloaded, they are entered into the database by no later than the following business day. The location indicated would be the tank into which the material is unloaded. Each time a transfer is made (e.g., from one tank to another, from a tank to the incinerator, etc.) the database will be updated within the following two business days. The bulk liquid tanks and the sludge tanks use a "first in, first out" tracking system. The bulk solids tanks use a "last in, first out" tracking system. These systems are not applicable for tracking waste codes; these procedures are discussed in the Waste Analysis Plan.

On occasion, material from a tank is placed into containers or it may be held temporarily in a tanker before transferring it to another tank (e.g., from tank cleanouts, feed rate verification tests, etc.). The containers will be barcoded and placed into permitted storage or the tanker will be placed in the drive through direct burn station, the truck unloading direct burn station, the bulk solids/sludge pad, E-1, E-5 or E-4 receiving docks, or will be off-loaded into a different tank within 24 hours. The waste tracking system is updated to show the new location of the waste. Also, if waste is transferred from one tanker to another, documentation will be maintained to show that transfer. The receiving tanker will be placed in the drive through direct burn station, the truck unloading direct burn station or another permitted bulk container storage area or will be off-loaded into a different tank within 24 hours.

5.9 Compressed Gas Cylinder Tracking

After cylinders have been off-loaded, they will be placed in racks with each rack having a capacity of twenty 9" diameter by 52" high cylinders. Each rack will contain cylinders with compatible materials.

The barcode number will be used to track the cylinder in real time and cylinder barcodes will contain the same information as those described in section 5.2. The Aragonite barcode label is placed on the cylinder during the receiving process. A green acceptance label or mark is placed on the barcode only after it has been determined that the waste will be accepted. Once the Aragonite barcode label is placed on the cylinder and a green acceptance label or mark is placed on the barcode, it is considered to have been accepted by Aragonite. The barcode label will be

placed so that it can be seen without removing the cylinder from the rack. If any cylinders are moved to the cylinder storage area prior to acceptance, each cylinder will be marked with the document and item number and the rack will be clearly identified as having cylinders that are not yet accepted. Racks of cylinders will not be moved to the cylinder feed station until all cylinders on that rack have been accepted. Each cylinder is identified by a unique number (which is a combination of the document number and the item number) which has been affixed to the cylinder. Cylinder inventory is tracked by recording the rack number that each cylinder is stored in. Additionally, the waste tracking system will indicate where each rack is located i.e., in the cylinder storage area, the cylinder feed station, or one of the receiving buildings. The glove box and an isolated location onsite where leaking containers are managed, are also identified as locations in the waste tracking system. Each time a rack of cylinders is moved or fed to the incinerator and individual cylinders moved to manage leaks, the waste tracking system is updated.

An operator will remove one rack at a time from the cylinder storage area and transport the rack to the cylinder feed station. Each rack will be fed as a job with the incineration chemistry being the same for all cylinders in a rack (using the worst-case chemistries from any cylinder on the rack). Before the first cylinder in a rack is fed, the job for that rack will be started by the control board operator. When the last cylinder in a rack has been fed, the job is stopped.

5.10 Drum Pumping Station

Containers that are fed directly to the incinerator through the drum pumping station will be moved by forklift from storage to the pumping station on the slag pad. They may also be staged and/or stored on the drum pumping storage pad prior to moving them to the drum pumping station. The drum pumping station and drum pumping storage locations are tracked in the waste tracking system as DRUMPUMP and DBSTO01 through DBSTO06.

Containers will be assembled into jobs with the incineration chemistry being the same for all of the containers on the job, using the worst-case chemistries from any container on the job. Before the first container on a job is fed, the control board operator will start the job for that container. This is done by selecting a virtual tank (SP01) where the chemistries for the job are stored as the source for the feed to that lance. When the last container on the job has been fed, the control board operator will stop the job.

After pumping, each container will be weighed. The weight of the container and its new location will be entered into the database. If all of the material was not pumped to the kiln, the material remaining will continue to be tracked with the container.

6.0 Emissions of Organic Vapors from Equipment Leaks

This section outlines the requirements for complying with the air emission standards for equipment leaks as established in 40 CFR 264 Subpart BB. The requirements include tagging and marking of affected equipment, inspecting and monitoring the equipment, repairing and reporting equipment leaks, and record keeping.

The regulated equipment includes any valve, pump, flange, grooved pipe connection, pressure relief device, or open ended valve that is in contact with gas, liquid, or sludge hazardous waste.

In order to eliminate the difficulty and expense of characterizing the organic content of the many waste streams processed at the facility, it will be assumed that all of the gas, liquid, and sludge waste have greater than ten percent organic content and all equipment is considered to be in light liquid service. Thus all equipment that is used for processing gas, liquid, or sludge waste is subject to these requirements. The physical state of all pumpable hazardous waste is considered to be liquid.

6.1 Equipment Tagging and Marking

All equipment subject to these requirements (described above) will be marked with a tag containing a unique equipment identification number. For most of these items the tag will be a weatherproof bar coded tag. These tags will also have the identification number in human readable form. Flanges that are covered by insulation must also be marked, either by bar coded tags, or by permanently marking the outside of the flange cover. These markings must be plainly visible. New or replaced equipment will also be marked as described above.

A weatherproof repair tag will be attached to any piece of equipment for which there is evidence of a leak (defined below). Each repair tag will be marked with the following information: the date the evidence of a leak was found (date suspected), the date that the leak was actually detected by monitoring (date detected), and the equipment Subpart BB identification number. The repair tag must be left in place before, during, and after repairs. It may be removed from any equipment item, except for valves, after the equipment repairs have been inspected. Repair tags for valves must remain on the valves until each valve has been monitored for two successive months without detecting any leaks.

6.2 Inspecting and Monitoring the Equipment

Monitoring in this section means testing with a VOC analyzer in accordance with EPA Method 21. Inspection shall mean a visual inspection for leaks. Leaks shall be defined as (1) hydrocarbon vapor monitor (HVM) instrument readings greater than 10,000 ppm, (2) visual indications of liquids dripping from a pump seal, or (3) physical evidence of leaking (visual, auditory, olfactory, or otherwise).

The pumps at the facility must be visually inspected weekly and monitored monthly. There are no alternative schedules for pump monitoring. Pumps must always be monitored each month regardless of how infrequently leaks are found.

Valves will be monitored on a monthly or quarterly basis. Initially, all valves shall be monitored monthly. For each valve that is not found to be leaking for two consecutive months, the monitoring frequency can be reduced to quarterly monitoring. An alternate frequency may be implemented upon notification of the Executive Secretary as outlined below.

(1) If fewer than two percent of all the valves within a hazardous waste management unit have detectable leaks for at least two consecutive quarters, all of the valves in that hazardous waste management unit may be monitored on a semi-annual basis.

(2) If fewer than two percent of all the valves within a hazardous waste management unit have detectable leaks for at least five consecutive quarters, all of the valves in that hazardous waste management unit may be monitored on an annual basis.

If the percentage of valves for any hazardous waste management unit exceeds two percent after achieving any of these monitoring frequencies, then the monitoring frequency will revert back to monthly. If after reverting to monthly monitoring, the requirements are again met for the alternate frequencies, then Aragonite may again notify the Executive Secretary of the facility's intent to comply with the alternate frequency.

There are conservation vents and rupture disks located on each tank farm tank and the large sludge tank. The conservation vents are vented through a closed vent system to a control device (afterburner or carbon canister system) as described in Attachment 14. The flanges around the rupture disks are marked. In the event that a rupture disk releases pressure, the disk will be replaced, and it will be monitored and achieve a standard of no detectable emissions (<500 ppm) within five calendar days of the pressure release.

There are currently no sampling connections in place at the facility. There are also no compressors at the facility that are in use with hazardous waste streams.

An open ended valve is any valve, except pressure relief valves, having one side of the valve seat in contact with the process fluid and one side open to the atmosphere, either directly or through an open pipe. All open ended valves that are connected to gas, liquid, or sludge hazardous waste piping must be fitted with a threaded cap or plug, which can be finger tight. The caps or plugs must be in place at all times except when necessary to open the valves during normal use of the equipment. As an alternative, a second valve may be installed in series. If a second valve is used, the first (inner) valve must be closed first and any hazardous waste allowed to drain or vent before the second (outer) valve is closed so that no process fluid is behind the second valve.

Scheduled monitoring of gasketed flanges, blind flanges, and grooved connectors is not required. If there is physical evidence of a leak, the flange or connector must be monitored within five days of such evidence being noted.

6.3 Repairing and Reporting Equipment Leaks

When leaks are found, the first attempt at repair (tightening packing nuts, etc.) must be initiated within five calendar days from the date the leak was found. The repairs must be completed within fifteen days of the discovery of the leak.

Repairs to leaking equipment can be delayed provided that any of the following conditions are met:

(1) The repair is technically infeasible without shutting down the hazardous waste management unit. Repairs delayed for this reason must be completed before the end of the next scheduled hazardous waste management unit shutdown.

(2) The equipment is valved out and any hazardous waste is removed.

(3) For valves, the emissions resulting from the repair would be greater than the emissions resulting from delaying the repair. The purged material resulting from the repair must be collected and destroyed or captured in a control device.

(4) For valves, repairs beyond the next hazardous waste management unit shutdown are allowed if the valve must be replaced and valve supplies have been depleted (the valve assembly supplies must have been sufficiently stocked before they were depleted). This delay of repair past the next shutdown will not be allowed unless the next shutdown occurs sooner than six months after the first shutdown.

(5) Delays in repairs for pumps are allowed if the repair requires the use of a dual mechanical seal system that includes a barrier system, and the repair is completed as soon as possible but not later than six months from when the leak was detected.

Reports shall be submitted to the Executive Secretary every six months and shall contain the following information: (1) the name, address, and EPA ID number of the Aragonite facility, (2) for any equipment for which leaks were discovered and which were not repaired within the fifteen day limit, provide the identification number, the hazardous waste management unit location, a description of the piece of equipment, and the reason(s) for not completing the repairs within the required time, and (3) dates of any hazardous waste management unit shutdowns. If all repairs were completed within the required time frames, no report will be required.

6.4 Record keeping

A database will be maintained which includes all of the required equipment. It will include the equipment identification number, the type of equipment, the hazardous waste management unit to which it is related, dates of inspection or monitoring, the name or ID number of the inspector, physical evidence of the leak (visual, sound, etc.), dates of leak detection, dates of first attempt at repair, and dates the repair was completed. Maintenance work orders will also be prepared and maintained to document the repairs made to the equipment. The identification numbers of all valves that are designated as either "difficult to monitor" or "unsafe to monitor" shall be entered into the database.

The approximate location of each piece of equipment will be shown on drawings to be maintained at the facility. These drawings and the database will be updated to reflect changes which are made to the equipment or piping. The equipment will be grouped into hazardous waste management units. These are defined by functional boundaries (i.e., kiln, front wall, south ABC, etc.)

The records shall include the dates of pressure release, repair dates, and monitoring results for rupture disks. For each pump, it will be specified which method of compliance will be used (either "monthly monitoring" or “equipped with dual mechanical seals"). If repairs to leaking equipment are delayed beyond fifteen days, the reason for the delay will be recorded as well as the expected date of repair. Documentation supporting the delay of repair of a valve beyond the next hazardous waste management shutdown shall be maintained. The statement and signature of the operator (or designee) who made the decision that a repair could not be made without a hazardous waste management shutdown shall also be maintained.

If either of the alternate frequencies for monitoring of valves has been chosen, all supporting documentation (e.g., letters to the Executive Secretary, monitoring results, calculation of percentage leaking if there are any leaking, equipment lists by hazardous waste management unit, etc.) shall be maintained.